

Evaluating Usability of a Classroom Website Designed to Improve Communication Between Home and School

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Abstract: Relationships and communication between home and school play a critical role in the development of young students and contribute to their overall success in school. Research suggests that when a school involves parents and families it in turn affects the success of the child. Typically, most communications between a child's home and school are done via some sort of paper-based flyer, form, brochure or packet. Therefore it is the sole responsibility of the student to be the gatekeeper of information between home and school. In some cases, there is a communication breakdown that occurs. By creating a classroom website, it allows parents to stay connected and informed about their child's learning. A usability study was conducted to evaluate the ease-of-use and functionality of a 5th grade classroom website designed to improve communication with parents at a public school in Hawaii. Feedback suggested changing the order of the pages by importance rather than alphabetically, providing summaries of the programs to make it easily accessible for parents, and adding a list of important dates to the welcome page of the site. Further research will be conducted to phase in an online gradebook and provide opportunities to promote further communication between home and school.

Introduction

Relationships and communication between school and home play a critical role in the development of young students and contribute to their overall success in school. Research suggests that when a school involves parents and families it in turn affects the success of the child. According to Unal (2008), "When teachers make parental involvement part of their regular teaching practice, parents increase their interactions with their children at home, feel more positive about their abilities to help their children in the elementary grades, and rate the teachers as better teachers overall; and students improve their attitudes and achievement" (p. 43). But today, parents are busier than ever and work multiple jobs just to make ends meet. The gap between home and school communications is getting larger. Most communications are done via some sort of paper-based flyer, form, brochure or packet. Therefore it is the sole responsibility of

the student to be the gatekeeper of information between home and school. As a result, there is a communication breakdown that occurs (Johnson, 2002).

In an article written by Johnson (2000), it illustrated the frustration that parents experience weeks after the first day of school. Parents were angry about the lack of communication and inadequate supports for their child. "Teacher-created Web pages available on the internet can help simplify communication and planning efforts...as we know, print materials sometimes doesn't make it home or out of the backpack." (Johnson, 2000, p.1).

As a 5th grade teacher at a local public school on the Big Island, I hope that this usability project will allow me to enhance a classroom website designed to improve home and school communication. This website will allow parents to access important documents, read class announcements, download homework assignments, get access to spelling lists, place book orders, and browse program links and helpful websites. The website will serve as a supplemental mode of communication and therefore enhance the communication that occurs between school and home.

The purpose of this usability study was to evaluate the ease-of-use and functionality of a 5th grade classroom website to improve communication with parents at a public school on the Big Island. The objective of this usability project was to identify ways to improve the classroom website in order to provide an easy-to-use, functional, and satisfying website that will increase the amount of communication that is done between school and home, and also decrease the chances of parents feeling "out of the loop." The website is designed to be an additional tool to help increase parent involvement and empower parents with the tools needed to support their child's development at home to be even more successful in school.

Literature Review

In this day and age, technology is ubiquitous. According to a U.S. Census conducted in 2011, 75.6 percent of households reported having a computer along with 71.7 percent reporting they have internet access at home (File, 2013). Parents themselves are more connected than ever through electronic communication tools such as email, social media, blogs, and the internet. Schools are finding links between school and home communication and increasing parental involvement through the creation of classroom websites (Unal & Unal, 2010). Classroom websites support the communication that occurs between a child's school and home and vice versa and helps to provide information about events, policies, curriculum and encourages parents to be involved in their child's learning process (Baker, 2007). Parents are becoming frustrated when information that they are expecting to find can not be found on the internet or readily available to them (Bodner, 2004). Webpages should be self-explanatory and obvious to the users of the site (Saragosa, 2014).

Research by Henderson and Mapp (2002) supports that families play a major role in influencing their child's achievement both in and out of school. "When schools, families, and community groups work together to support learning, children tend to do better in school, stay in school longer, and like school more." (Henderson and Mapp, 2002, p.7). Developing and evaluating a

classroom website will give insight into the ease-of-use and overall user-satisfaction to improve communication between parents and provide anytime, anywhere access.

In a study conducted by Baker (2007), it analyzed a set of 120 class websites that were taken from K-6 grade classrooms to see if the websites supported a student's literacy development. In the first phase of the study, three basic categories emerged: newsletters, external links, and supports for publishing (ex: exemplars, rubrics, and checklists). The study found that all of the sites included some sort of basal/skills approach when it comes to developing literacy. Basal/skills approaches include things such as: spelling lists, vocabulary words, sight words, and links to state standards. Nearly half of the websites had features that supported process-writing and unit-based approaches. Also, 70% of the websites analyzed provided information and supports for parents.

In a separate study, a post-study survey on a single classroom website revealed valuable information about the most requested website items by parents (Mills, 2013). In order of importance they were: homework, parent information, monthly calendar, classroom blogs and newsletters, about the teacher, links to external websites, volunteer forms and book orders. Between testing sessions several more items were added to the list, including: math, volunteers and donations, language arts, and Youtube favorites. The two most frequented pages on the website were blog posts/ news tab, and educational websites tab. In conclusion, the study found that 100% of the participants reported that a classroom website helped them to be more informed about their child's learning. Also, notifying parents, via email, of updates to the site also helped increase parent involvement (Mills, 2013).

Project Design & Development

Background

The institution that I am a current 5th grade teacher at supports technology integration in all forms. Being one of three Language Arts teachers on the grade level, we were getting a lot of phone calls and emails regarding spelling lists and what reading strategies or skills are being taught in school. Therefore, this classroom website was a solution to children misplacing their materials for the week and the idea expanded into a classroom site. Prior to conducting the usability study, the classroom website was designed and created using Weebly.com. The website was designed and created with parents in mind. To identify what components to include on the website, recommendations were gathered through informal conversations with experienced teachers and family members of students in the public school system. A large component of my website include the features found in this particular study including the spelling newsletters that give parents quick information about the unit and week of study in our *Wonders* Language Arts curriculum.

Website Design

When the prototype was being designed, the main goal was to select a design template from Weebly that was self-explanatory, able to focus users' attention, strive for simplicity, and have

ample white space (Friedman, 2008). It was decided at this point that the navigation bar would be located on the left-hand side of the screen and remain static as users navigate the site (See Figure 1). Also, when the navigational bar was located across the top half of the screen it was found that there was not enough space for all of the tabs to be present. The background was kept white so as to not distract users' attention. Placeholders for links and images were placed onto the site to get the basic structure in place.

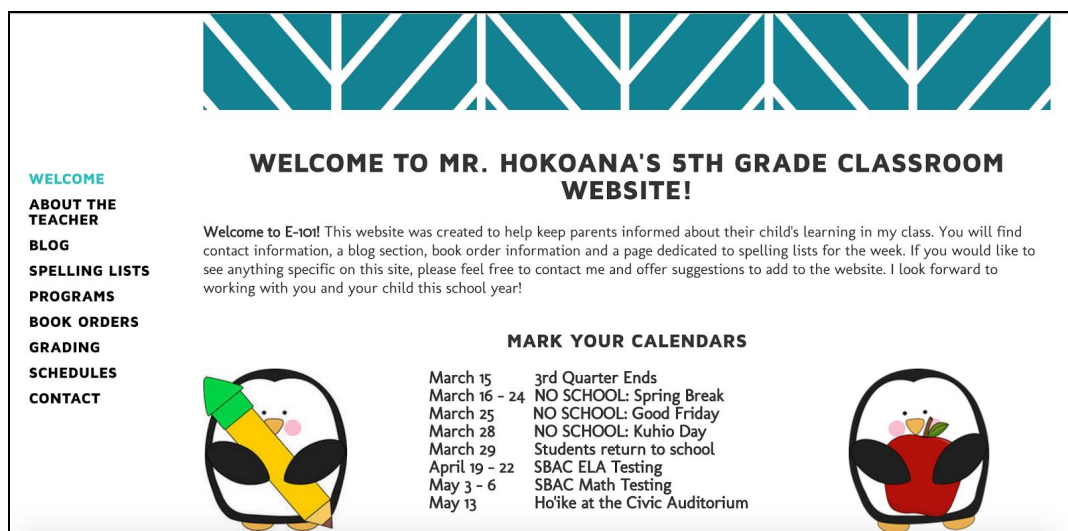


Figure 1. Homepage of the classroom website.

Various components on the website were created to engage and meet the needs of the users. A “Contact” section was added for parents to compose and send an email without needing to open up their own email. Parents are given the option to call their child’s teacher or contact via email. The messages left in that section are referred to the researcher’s work email (see Figure 2).

Figure 2. Contact section of the classroom website.

Then, a “Spelling” section (see Figure 3) was added to help inform parents of their child’s spelling, vocabulary, and weekly overview of strategies, skills, and concepts covered in

Language Arts class. Featured on this page are the six units of study for the entire year. The weekly newsletters are available to download or view as portable document file files in order to minimize the potential for formatting errors to occur when switching between .doc, .docx, or .odt. In the future a pacing-guide, a document with specific dates and times of material covered, will be added to the site for parents to reference.

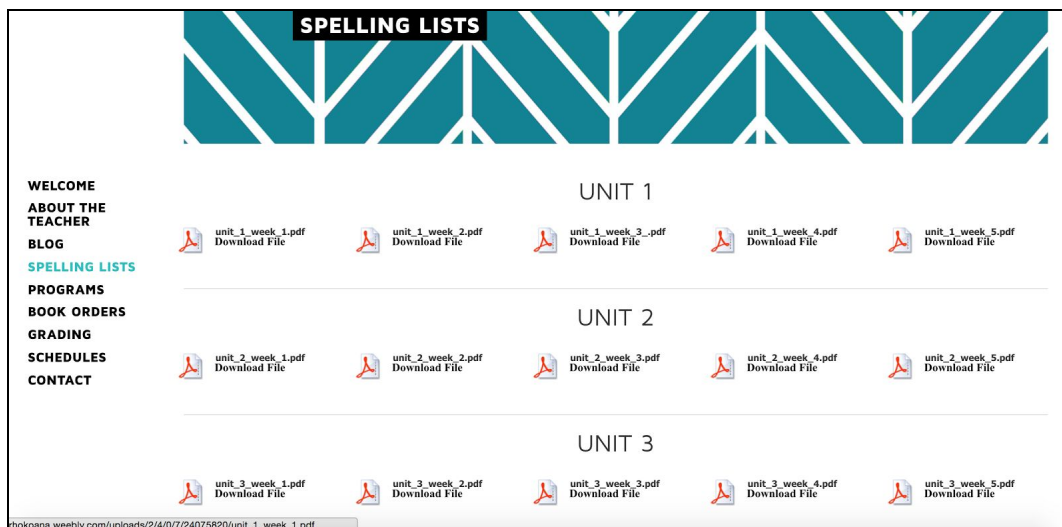


Figure 3. Spelling list page on the classroom website for parent access.

This year our school changed our bell schedule to reflect three blocks of instruction and this year the school added an intervention block at the ending of the school day. Because we specialize in content areas, parents were curious what the weekly breakdown looked like for Language arts, math, science and social studies. As much as possible we try to stress the importance of not missing any core instructional blocks.

[SchoolYear15-16_BellSchedule.pdf](#)
Download File

[HOKOANAHomeroom_WeekSchedule](#)
Download File

[HASHIMOTOHomeroom_WeekSchedule](#)
Download File

WELCOME
ABOUT THE TEACHER
BLOG
SPELLING LISTS
PROGRAMS
BOOK ORDERS
GRADING
SCHEDULES
CONTACT

SY 2015-2016

Grades 3 ~ 5

Monday, Tuesday, Thursday, Friday

	Start Time	End Time	Length
Opening	8:00 am	8:10 am	10 min
Introduction	8:10 am	9:40 am	90 min
Recess	9:40 am	9:55 am	15 min
Passing	9:55 am	10:00 am	5 min
Instruction	10:00 am	11:30 am	90 min
Lunch	11:30 am	12:00 pm	30 min
Passing	12:00 pm	12:05 pm	5 min
Instruction	12:05 pm	1:35 pm	90 min
Passing	1:35 pm	1:40 pm	5 min
Instruction	1:40 pm	2:15 pm	35 min

Wednesday

	Start Time	End Time	Length
Opening	8:00 am	8:10 am	10 min
Introduction	8:10 am	9:35 am	85 min
Recess	9:35 am	9:50 am	15 min
Passing	9:50 am	9:55 am	5 min
Instruction	9:55 am	11:20 am	85 min
Lunch	11:20 am	11:50 am	30 min
Passing	11:50 am	11:55 am	5 min
Instruction	11:55 am	12:20 pm	25 min

Figure 4. Class schedules page of the website with bell & specific subject schedules.

A grading page (see Figure 5) was added due to the overwhelming number of parents asking about the correlation between percentages and Hawaii State DOE elementary grading scale. We also had a number of questions about the General Learner Outcomes and a section of the page is dedicated to the GLOs.

GRADING SCALE

Percentages	Grade
100 – 95	ME (Meets with Excellence)
94 – 75	MP (Meets Proficiency)
74 – 50	DP (Developing Proficiency)
49 & below	WB (Well Below)

What is the difference between formative and summative assessments?

WELCOME ABOUT THE TEACHER BLOG SPELLING LISTS PROGRAMS BOOK ORDERS GRADING SCHEDULES CONTACT

Formative assessments are used by teachers as a quick "snapshot" of a student's learning to help monitor student progress. Formative assessments are generally low-stakes and are mainly used to help teachers improve their teaching and students to improve their learning. Examples of formative assessments include:

- writing a quick summary of an article
- submitting a draft of an essay
- completing a workbook page
- exit passes

Summative assessments are used by teachers to see how much knowledge a student has gained at the end of an instructional unit. Summative assessments are generally more high-stakes and have a higher point value to them. Examples of summative assessments include:

- a final essay
- a final research project
- an oral report
- an end-of-unit-test

GLOs – General Learner Outcomes

Aside from content, students are also assessed on their GLOs. The General Learner Outcomes are meant to be over-arching goals for all students across all grade levels in the Department of Education. Students are assessed on these individual GLOs and receive quarterly ratings based on how well they have demonstrated that outcome. The GLOs are:

1. **Self-Directed Learner** - The ability to be responsible for one's own learning
2. **Community Contributor** - The understanding that is essential for human beings to work together
3. **Complex Thinker** - The ability to demonstrate critical thinking and problem solving strategies
4. **Quality Producer** - The ability to recognize and produce quality performance and quality products
5. **Effective Communicator** - The ability to communicate effectively
6. **Effective and Ethical User of Technology** - The ability to use a variety of technologies effectively and ethically

Figure 5. Grading section of the classroom website.

A class blog section (see Figure 6) was suggested by a parent at a conference earlier in the year. She was interested in seeing pictures of her child and reading and seeing what was happening in class in terms of class projects, units of study, or any important announcements or reminders.

WELCOME ABOUT THE TEACHER BLOG SPELLING LISTS PROGRAMS BOOK ORDERS GRADING SCHEDULES CONTACT

SPRING BREAK

3/14/2016

[COMMENTS](#)



Aloha Families!

This year, our spring break will run from Wednesday, March 16th through Monday, March 28th. This year our break is extended due to Good Friday falling on March 25 and our observance of Kuhio Day on March 28. Students will return to school on Tuesday March 29th.

I would like to congratulate all of the students on completing another quarter of school. Fourth quarter we have a lot of things to look forward to - we have our SBAC testing which will start in April. Also, our Ho'i'ke performance is scheduled for Friday, May 13 and our end-of-year assembly and 5th grade banquet is scheduled for the last day of school, May 26.

I hope that all of you have a fabulous spring break spent with friends and family. Lets hope for sun amidst the Merrie Monarch festivities around Hilo town!

Aloha,
Mr. Hokoana

AUTHOR

Mr. Hokoana

ARCHIVES

March 2016

CATEGORIES

All

[RSS Feed](#)

Figure 6. Blog section of the classroom website.

An about the teacher page (see Figure 7) was included to give parents information about their child's teacher. Years of experience and their child's teachers interest were also included with pictures.

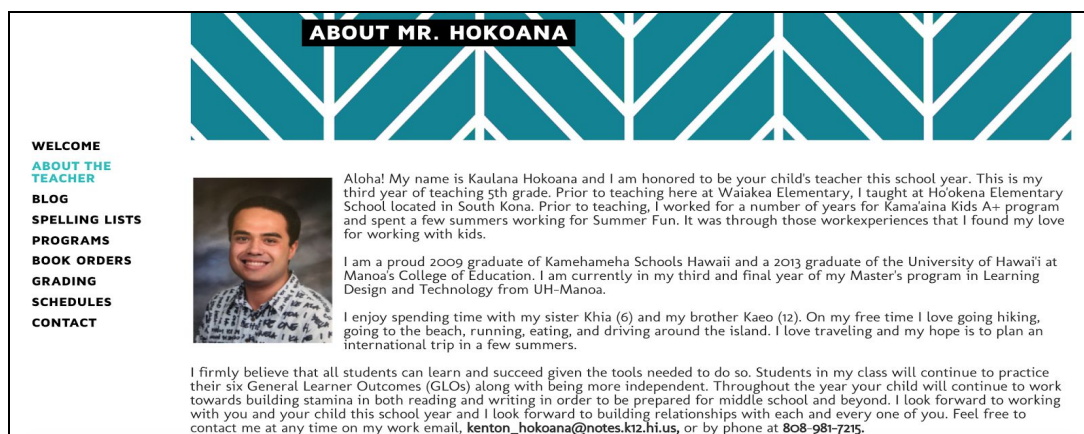


Figure 7. 'About the Teacher' page of the classroom website.

Research has shown that users typically make judgments on the credibility of a website within the first 3 seconds of using it (Glore & David, 2012). Therefore, aesthetics and overall appeal was taken into consideration throughout the design process. A user-centered approach was taken in designing this classroom website, as is suggested with research regarding usability studies (Hornbæk, 2006). The links and the picture header at the top of most of the website's pages were kept in the same color scheme to minimize the amount of colors being used to decrease distractions.

Modifications

Several modifications were made to the site based off of feedback collected from the usability testing. First, more information on the Programs page were added to offer parents more information about the programs and their intended purpose for at-home-practice. Initially, as seen in Figure 8, the programs did not offer much information to parents regarding the programs. Information, as shown in Figure 9, was added for parent reference. The pictures and titles of the programs on the page were also later linked to the external websites themselves for easier access.

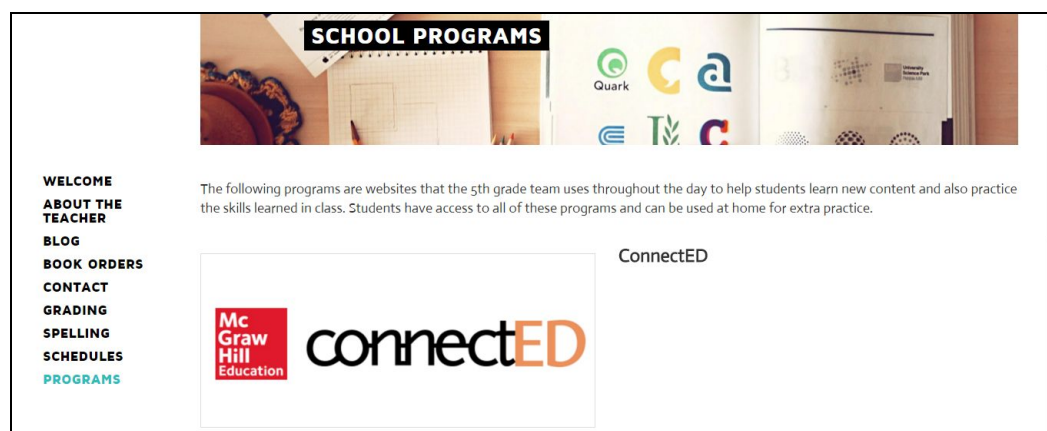


Figure 8. School programs page in the beta website.

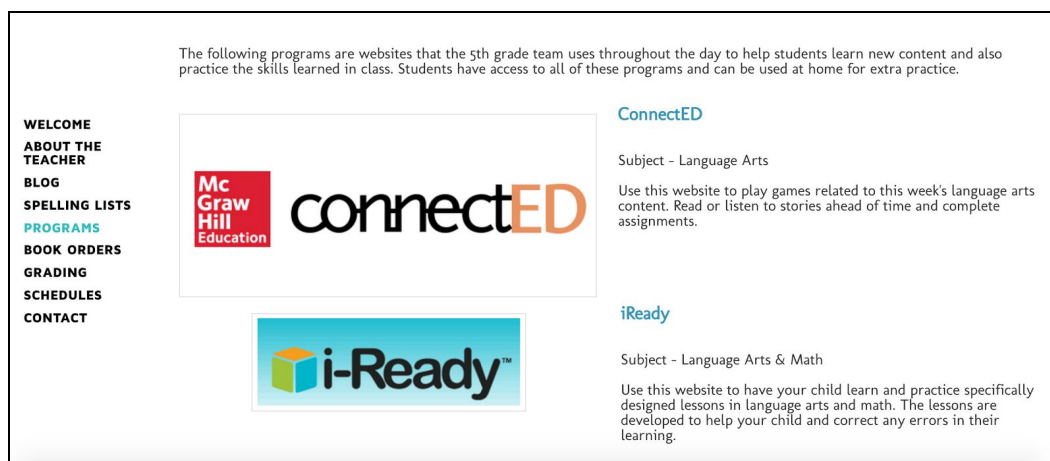


Figure 9. School programs page in the final version of the website that included the descriptions and subject areas of the programs.

Further modifications were made based on feedback. Page links were reordered from alphabetical order (see Figure 10) to one that is based on importance and need (see Figure 11). The final modification to the site was simply adding a “Welcome” header and message on the homepage of the screen to ensure that the users knew it was a classroom website intended for parents to use.



Figure 10. Navigation bar after the first round of testing.

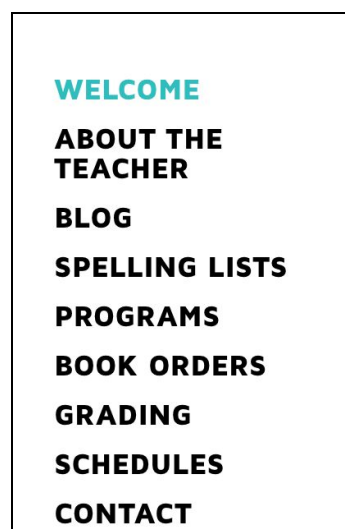


Figure 11. Navigation bar after feedback and further testing.

Conclusion

The use of usability testing has drastically helped the design and implementation of a classroom website to help increase the amount of communication done between school and home, and vice versa. This website will hopefully help parents stay “in the loop” and offer yet another mode of

communication for parents and family members. Parents will be able to stay informed about what skills and strategies are being taught in Language Arts. With the added modes of communication, student achievement will increase as a result of parents knowing what is being done in class and ways to support their child's learning at home.

The research done in this study could lead to further research and development on the website. Based on feedback gained during this usability study, more website content will need to be developed. Parents expressed their interest in also knowing what is going on in their child's math class. Therefore, I plan to collaborate with the math teacher to make the math information available to parents. Also, parents expressed placing a "comments or suggestion" section to elicit feedback on the website. So, that will be in the process of website development for next school year. Lastly, parents expressed a great deal of interest in their child's grades in school. As a result of that discussion, further research into online gradebooks will be needed to offer real-time access to parents of their child's progress in school.

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